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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/667,577 | 09/22/2003 | Carl M. Ross | NON PROV-1 | 9649 |
| 7590 | 09/15/2006 | | EXAMINER GILLAN, RYAN P | |
| Carl M. Ross 1654 Fifth Ave Bayshore, NY 11706 | | | ART UNIT 3746 | PAPER NUMBER |

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/667,577

Applicant(s)

ROSS, CARL M.

Examiner

Ryan P. Gillan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 10-14 recite the limitation "the system of claim" in the first line of each claim. There is insufficient antecedent basis for this limitation in the claim. The independent claim (claim 9) from which these all depend, claims a method and therefore, for purposes of examination it is presumed that claims 10-14 are referring the method as recited in claim 9.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izaguirre (5,305,779) in view of Koenig et al. (5,923,102). Izaguirre, Figures 1a-2b, teach a pumping system and an associated method for sensing and moving liquid comprising a liquid sensor (28, 29, 86, and also 74, 78, 80, 82) for sensing liquid and being constructed and arranged to provide an electrical signal when exposed to the liquid. The device also includes a control unit (Figure 2b) comprising a relay (104-1, 106, 106-1, 112), whereby the relay (104-1, 106, 106-1, 112) becomes activated by the electrical signal provided by the sensor (28, 29, 86, and also 74, 78, 80, 82). The system includes a pump (68) for moving liquid that has been sensed by the sensor (28, 29, 86, and also 74, 78, 80, 82) from a first location (in tank 66) to a second location

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(outside the 66). When the relay (start relay 104-1) becomes activated (by sensor 29, 80), the pump (68) is powered on.

4. The Izaguirre device differs from the claimed invention in that there is no explicit teaching of a power converter for converting an input AC voltage to a DC voltage where the DC voltage is output from the power converter of the electric motor of the pump and the control unit and power converter are not separate from the pump.

5. AC lines (108, 110) indicate that the power supply of the system is an AC voltage source. It was well known in the art that AC power sources are more economical to use and transport than DC voltage sources. However, DC motors are inexpensive and versatile for pump actuation. Koenig et al. teaches an analogous sump pump, control, and monitoring system. Koenig et al. also teaches an AC power source (13) for the pump, which is converted to DC for direct consumption by the pump motor (col. 5 lines 24-43). This power converter device (12), which along with the controller, are separate from the pump (clearly seen in figure 1), allows the use of readily available and efficient AC power coupled with an inexpensive and versatile DC motor. Furthermore, the Koenig et al. device includes a battery backup power supply in the event AC power is unavailable (col. 5 lines 38-43). Power sources are adjusted with automatic switches (col. 5 lines 24-43). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Izaguirre device by, incorporating the AC power converter, as taught by Koenig et al., in order to advantageously allow the use of readily available and efficient AC power coupled with an inexpensive and versatile DC motor. Furthermore it would have been obvious to one of ordinary skill in the art at the

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time of the invention to modify the Izaguirre device by, incorporating the AC power supply with the DC power backup and switch, as taught by Koenig et al. in order to advantageously prevent pumping disruption in the event of AC power loss (col. 5 lines 38-43).

6. A second liquid sensor (82, 106-1, 106-2, see col. 8 lines 12-17) activates a second relay (112) of the control unit (Figure 2b), which supplies DC voltage to a visual and audible notification means (horn 116, light 114) for indicating the presence of an initial collection of liquid.

7. The system includes a switch (94) for bypassing the sensor so that the pump may, in a manual mode, obtain power duty from the control (Figure 2b) unit without the need to sense liquid in an automatic mode (col. 7 line 65 - col. 8 line 2).

8. With respect to the exact voltage conversion from 120 volts AC to 12 volts DC, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCP (Patents) 12550, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. COE, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

9. Claims 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izaguirre (5,305,779) in view of Koenig et al. (5,923,102) and Adahan (5,592,030). The combination of Izaguirre and Koenig et al. teach all of the above cited claim limitations, but fail to explicitly teach a transformer as part of the power converter.

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10. Adahan teaches a power converter for electrical motors and pumps (abstract).

Adahan also teaches a transformer as part of the power converter (col. 1 lines 39-63).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the power converter as taught by Koenig et al. to include a transformer as a means of not only converting the voltage, but also to store the energy before supplying it to the pump motor or battery (col. 4 lines 9-14).

11. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izaguirre (5,305,779) in view of Koenig et al. (5,923,102), Adahan (5,592,030) and Niedermeyer (3,941,507). The combination of Izaguirre, Koenig et al. and Adahan teach all of the limitations of the claims as cited above, but fail to teach a telephone dialer system as the notification means.

12. Niedermeyer teaches an analogous sump pump monitoring system that also includes a telephone dialer as a notification of a variety of sensor readings (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the notification sensor of Izaguirre to include a telephone dialer as an automatic means of summoning assistance for simple notification of an existing condition (abstract).

Response to Arguments

13. Applicant's arguments with respect to claim 1-20 have been considered but are moot in view of the new ground(s) of rejection. The new grounds of rejection as cited above have overcome the amendments made by the applicant.

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With regard to applicant's argument that the combination of Izaguirre and Leighton was inappropriate due to the lack of the prior art itself setting forth a "specific teaching that recommends combining the references," the examiner finds this argument unpersuasive. In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures, taken as a whole, would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, 163 USPQ 545 (CCPA. 1969).

Conclusion

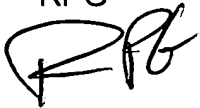
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan P. Gillan whose telephone number is 571-272-8381. The examiner can normally be reached on 8:30 am - 5:00 pm; Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RPG



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PRIMARY EXAMINER